APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,245	12/02/2003	Simon Robert Walmsley	PEA04US	4557

24011	7590	07/10/2006	

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EXAMINER
UHLENHAKE, JASON S

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

⊣A

	Application No.	Applicant(s)
Office Action Summary	10/727,245	WALMSLEY ET AL.
	Examiner	Art Unit	
	Jason Uhlenhake	2853	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _12 May 2006_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final..

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-8_ is/are pending in the application.

    4a) Of the above claim(s) _6_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-8_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _12/2/2004_.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.   A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/727,163. Although the conflicting claims are not identical, they are not patentably distinct from each other because a printer controller being configured to order and time supply of the dot data to the printhead modules anticipates being configurable during or after manufacture to order and time supply of dot data to the printhead modules.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Haflinger

(U.S. Pub. 2002/0180816).

Haflinger discloses:

- *regarding claim 1,* a printer controller for supplying dot data to a

printhead in a predetermined order comprising at least first and second printhead

modules, each comprising a plurality of printing nozzles and disposed adjacent to each

other such that a printing width of the printhead is wider than a printing width of either of

the printhead modules (Figures 2 – 3; Paragraphs 0007, 0029; Claims 5 and 10)

- order and time supply of the dot data to the printhead modules such that

any relative displacement between the printhead nozzles in a direction normal to the

printhead printing width is at least partially compensated for (Figures 3 – 7; Abstract;

Paragraphs 0013, 0038)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Haflinger (U.S. Pub. 2002/0180816) in view of Hackleman et al (U.S. Pat. 5,719,602).

Haflinger discloses all of the claimed limitations except for the following:

-        ***regarding claim 2***, a printhead modules comprise a plurality of rows of

the printing nozzles, the controller being configured to supply the dot data to the rows

of nozzles in serial form

-        ***regarding claim 3***, a controller configured to serially supply the data to a

first row of nozzles , the data being serially clocked through the first for of each pair of

rows, then through a second row of each pair of rows, until all printhead nozzles have

received their respective data.

Hackleman et al discloses the following:

-        ***regarding claim 2***, a printhead modules comprise a plurality of rows of

the printing nozzles, the controller being configured to supply the dot data to the rows

of nozzles in serial form (Column 5, Lines 34-57) for the purpose of controlling the

firing of printhead nozzles as a function of media speed.

-        ***regarding claim 3***, a controller configured to serially supply the data to a

first row of nozzles , the data being serially clocked through the first for of each pair of

rows, then through a second row of each pair of rows, until all printhead nozzles have

received their respective data. (Column 5, Lines 34-57) for the purpose of adjusting

nozzle time to print, thus the time to complete a print job is less.

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to incorporate the teaching of a printhead modules comprise a

plurality of rows of the printing nozzles, the controller being configured to supply the

dot data to the rows of nozzles in serial form; a controller configured to serially supply

the data to a first row of nozzles, the data being serially clocked through the first for of

each pair of rows, then through a second row of each pair of rows, until all printhead

nozzles have received their respective data as taught by Hackleman into the device of

Haflinger. The motivation for doing so would have been to increase the speed of

printing.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haflinger

(U.S. Pub. 2002/0180816) as modified by Hackleman et al (U.S. Pat. 5,719,602) as

applied to claim 1 above, and further in view of Kamoshida et al (U.S. Pub

2002/0075339).

Haflinger as modified by Hackleman et al discloses all of the claimed

limitations except for the following:

- ***regarding claim 4***, data is clocked through the second row in a direction substantially opposite to that in which it was clocked through the first row

Kamoshida et al discloses the following:

- ***regarding claim 4***, data is clocked through the second row in a direction substantially opposite to that in which it was clocked through the first row (Paragraphs 0005, 0011).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of data clocked through the second row in a direction substantially opposite to that in which it was clocked through the first row as taught by Kamoshida et al into the device of Haflinger as modified by Hackleman et al. The motivation for doing so would have been to improve the efficiency of the printing mechanism and thus improving the quality of printing.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teshigawara et al (U.S. pat. 6,669,331) in view of Noyes et al (U.S. Pat. 6,775,022)

Teshigawara et al discloses:

- ***regarding claim 5,*** printer controller comprises non-volatile memory (Column 7, Lines 65 – 67; Column 8, Lines 1 – 6; Column 17, Lines 46 – 62) at least one printhead module, the printer controller being configurable to supply the dot data to a selectable one of a plurality of potential printhead module types, each printhead module type having a different number of nozzles for receiving the dot data (Figures 3 – 4; Column 10, 19 - 42)

Teshigawara et al does not disclose expressly:

-        ***regarding claim 5,*** non-volatile memory for storing at least one parameter value indicating which of the potential printhead types the printer controller has been configured to supply data to

Noyes et al discloses:

-        ***regarding claim 5,*** non-volatile memory for storing at least one parameter value indicating which of the potential printhead types the printer controller has been configured to supply data to (Column 15, Lines 1 – 20; Column 18, Lines 34 – 42), for the purpose of improving image quality by taking into consideration print head characteristics.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of a non-volatile memory for storing at least one parameter value indicating which of the potential printhead types the printer controller has been configured to supply data to as taught by Noyes et al into the device of Teshigawara. The motivation for doing so would have been to improve quality by taking into consideration print head characteristics.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teshigawara et al (U.S. pat. 6,669,331) as modified by Noyes et al (U.S. Pat. 6,775,022), as applied to claim 5 above, and further in view of Oshima (U.S. Pub. 2002/0158934).

Teshiqwara et al as modified by Noyes et al discloses:

- ***regarding claim 7***, configureable to supply dot data to printhead module

on basis of one or more printer module widths (Figures 3 – 4; Column 10, 19 - 42)

- ***regarding claim 8***, configurable to supply the dot data to a plurality of

printhead modules, on basis of one or more widths of printhead modules (Figures 3 –

4; Column 10, 19 - 42)

Teshigawara et al as modified by Noyes et al does not disclose:

- ***regarding claims 7 and 8***, printer module widths indicated by at least one

parameter

Oshima discloses the following:

- ***regarding claims 7 and 8***, printer module widths indicated by at least one

parameter (Paragraph 0043) for the purpose of providing a printing apparatus and

printhead characteristic data selection method, which can appropriately handle

printhead characteristic data under various environments.

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to incorporate the teaching of printer module widths indicated by

at least one parameter as taught by Oshima into the device of Teshigawara et al as

modified by Noyes et al. The motivation for doing so would have been to provide

providing a printing apparatus and printhead characteristic data selection method, which

can appropriately handle printhead characteristic data under various environments.
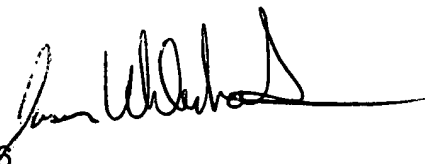
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSU
June 14, 2006

K. FEGGINS
PRIMARY EXAMINER